II. Remarks

A. Introduction

Upon entry of this Amendment, claims 1-30 are pending. Claims 1-8, 12, 13, and 16-30 stand rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,276,430 to *Granovsky*. Claims 9-11, 14, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

B. Rejection of Claims 1-8, 12, 13, and 16-30 Under 35 U.S.C. § 102(b) as Anticipated by U.S. Patent No. 5,276,430 to *Granovsky*.

A Plurality of Different Antenna Patterns

Claim 1 refers to a method for determining whether a radio frequency identification device is detected. The method includes "selecting a plurality of different antenna patterns." Each antenna pattern is configured to receive a signal corresponding to an independent variable.

Applicant respectfully submits that *Granovsky* does not teach or suggest "selecting a plurality of different antenna patterns, each antenna pattern configured to receive a signal corresponding to an independent variable." *Granovsky* teaches a passageway (also referred to as a gate; *see* column 4, line 34) having a first panel and possibly also having a second panel. A gate can have two panels ("this gate is defined by two identical panels...," column 4, line 39; column 5, lines 64-68) or only one panel "... an additional gate ... can be achieved by installing an additional panel ...." (column 5, lines 39-40). Each panel can be between two gates. Each panel has a "set" of one transmitting antenna and one receiving antenna ("...every panel, containing a set of transmitting and receiving antennae...", column 5, lines 64-65). Since a gate can have either one or two panels, a gate can have either (a) a transmitting antenna and a receiving antenna, or (b) a pair of transmitting antennas and a pair of receiving antennas. When a gate has two identical panels, it has a pair of transmitting antenna and a pair of receiving antennas (column 4, lines 39-42).

Each panel contains a set of antennae, i.e. a set of transmitting and receiving antennae. The panel (and the set of antennae) "is common for both gates adjacent to it. For example, the panel containing antennae 4 and 7 ..." (column 5, lines 64-68). Therefore, in *Granovsky*, a "panel" contains a transmitting antenna and a receiving antenna, and is a specific location between two gates. (column 5, line 64-68).

Within each passageway (i.e., the region between adjacent gates) one antenna transmits and the other antenna receives. There is no reason to suppose that *Granovsky* intends that the transmitting antenna and the receiving antenna have different antenna patterns; in fact, just the opposite should be supposed. From antenna theory, one skilled in the art will realize that it is far easier to receive a transmitted signal if the antenna that transmits and the antenna that receives are in some way aligned. Therefore, one of ordinary skill in the art reading *Granovsky* would not suppose that within each passageway the antenna that transmits would have an opposite polarization from the antenna that receives, for example. Yet in claim 1 of the present invention, there is a plurality of different antenna patterns from which a selection is made. *Granovsky* clearly does not anticipate or suggest the method set forth in claim 1, in which the different antenna patterns are each configured to receive a signal corresponding to an independent variable.

In an attempt to bolster the proposition that *Granovsky* teaches a plurality of different antenna patterns, the Examiner refers to the OR gate 28 and "logically AND'ing the signals received from the plurality of antenna patterns in order to determine the presence of the RFID." Office Action, page 2. However, the OR-gate described in *Granovsky* does not mix or select antenna patterns; rather, it merely lets a user know that at least one zone has been penetrated. *Granovsky* teaches that the OR gate (28) is actually used to combine a signal from each of several distinct passageways. (The structure of each gate having a dedicated signal processor can use either individual alarms for each protected passageway, or bring together all the alarm signals (32,33...) from all signal processors using a logic OR gate (28). Such a structure also allows the use of various possible combinations of these above-mentioned approaches." (column 5, lines 46-52). *Granovsky* even admits that the OR-gate (28) cannot select antenna patterns: "the audio alarm is unable to indicate through which gate the attempt to smuggle a protected object has been made. This can be especially difficult situation when traffic through the gates is dense. That is why in the system, as shown in FIG. 1, individual visual alarm devices (e.g. blinking lamps 23,24) are employed." (column 5, lines 58-63). In *Granovsky*, the gate 28 does not appear to "select" an antenna pattern, but merely to select the alarm to be activated.

Applicant recognizes that *Granovsky* does teach fields of "phase opposition" (column 7, line 68). However, the perpendicular fields are in adjacent zones to minimize interference from

one zone to another, not to complement each other within a zone. The purpose is to "create a dead zone within passageway 1..." (column 8, lines 12-13).

In *Granovsky*, one set of antenna patterns is used in odd-numbered zones and a different set of antenna patterns is used in even-numbered zones ("...both these neighbouring transmitters Tx1 and Tx3 must be acting exactly in the same manner. Being identical, these transmitters must be controlled by the same set of commands (12) from the controller (14). That means that in a multigate system all odd numbered transmitters (Tx1, Tx3, etc) are connected to the controller (14) via a common control line (12), whereas all even numbered transmitters (Tx2, Tx4, etc.) are getting commands from the controller (14) using another common control line (13). In the multigate system of the present invention all signal-processors are identical and are controlled by the same set of commands (25) from the controller (14)." Column 6, lines 12-22. However, this is not the same as "selecting a plurality of different antenna patterns, each antenna pattern configured to receive a signal corresponding to an independent variable." In *Granovsky*, there is no selecting from multiple different antenna patterns; only one antenna pattern exists within each zone.

RF ID TAG

The method of claim 1 includes "reading data from the radio frequency identification device." In Granovsky, however, the tag and antenna pattern serve to activate the gate and to activate an alarm, not to read the tag. *Granovsky* teaches "detection of a magnetic security tag..." *Granovsky*, column 3, line 10. Applicant respectfully submits that a magnetic security tag does not anticipate a radio frequency identification device, as set forth in claim 1. According to *Granovsky* (column 4, lines 49-50), "This field is able to drive the soft (i.e., having narrow hysterisis) loop magnetic material, of which the security tag is made..." The tag of *Granovsky* is therefore merely a magnetic tag, made of a material not ordinarily found on other metal objects such as shopping carts, not a radio frequency identification device containing data. Certainly, *Granovsky* does not teach or suggest reading data from the radio frequency identification device. Applicant respectfully submits that the magnetic security tag in *Granovsky* does not contain data to be read.

The stated purpose of Granovsky is to only to determine the presence of the tag – not read its ID, status, data and location or identify after processing the corresponding antenna patterns and variables. The system activates an alarm only and does not read the tag ID, status or

other data – a requirement requiring the knowledge of whether it is A or B or C etc. – not that it is one or more of the total. The system or alarm does not indicate which antenna pattern has been activated by a tag, therefore, it cannot determine what antenna pattern or variables are appropriate. The two systems have fundamentally different purposes.

As described in the specification, the data is not restricted only to a logic bit or input but may be multiple bits and weighting associated with AD conversion, as defined on page 16, line 35, of the specification. Therefore, a simple OR gate metaphor does not describe the actual "OR" expression and function defined in the text.

Locating

Moreover, Applicant respectfully submits that *Granovsky* does not teach or suggest "locating the radio frequency identification device within a specific antenna, emitter or detector pattern," as set forth in claim 1. *Granovsky* teaches "detection of a magnetic security tag within a protected zone surveyed by an oscillatory electromagnetic field." (Column 3, line 10). In other words, *Granovsky* teaches knowing that the tag is somewhere in the zone, but does not specifically identify where in the zone the tag might be. *Granovsky* even admits that "the audio alarm is unable to indicate through which gate the attempt to smuggle a protected object has been made." Column 5, lines 58-59.

As indicated in the specification, at page 12, lines 12-16, "... antennas (and reflected RF energy) exhibit patterns that may be directional, polarized, or a combination of directional and various polarizations, the determination of in-range with reference to link distance for a first antenna (e.g. horizontally polarized) may be substantially unrelated to a determination of in-range with reference to link distance for a second antenna (e.g., vertically polarized)." In the following paragraph (Specification, page 12, lines 27-31), the specification states that "a preferred model includes two or more independent variables.... When a link includes a path at each of two frequencies and narrow band observations (e.g., tests) are made at one end of the link, the resulting measurements may participate in a model as values of independent variables." Page 13, line 12 describes using directional antennas in a radio link, such that all of the properties of a signal received from a first direction may be independent of all properties of a signal received from a suitably non-overlapping direction. A first range of magnitude may correspond to a line-of-sight communication, and other weaker magnitudes may correspond to

first and second reflection, each range of magnitude may correspond to a different independent variable.

As indicated above, the use of the "OR" gate, asserted on page 2 of the Office Action to be relevant to the patentability of the present invention, actually teaches away from a step of locating. If the presence of the tag in each zone is "OR'ed" together, as in *Granovsky*, then specific information as to which gate the tag is in is lost.

Plurality of Distinct Thresholds

The method of claim 1 includes "determining a plurality of results each responsive to whether a respective communication link provides a respective signal having a respective amplitude exceeding a respective threshold, each communication link operative in accordance with at least one of the selected antenna patterns."

Applicant respectfully submits that *Granovsky* does not teach or suggest different thresholds, each associated with a distinct antenna pattern. Each communication link is operative in accordance with at least one of the selected antenna patterns. Moreover, Applicant respectfully submits that *Granovsky* does not teach or suggest selecting a logical combination of the results, each indicating whether the corresponding threshold has been exceeded. As set forth in claim 1, each result is responsive to whether a respective communication link provides a respective signal having a respective amplitude exceeding a respective threshold.

C. Allowable Subject Matter.

Claims 9-11, 14, and 15 have be rewritten in independent form. Applicant gratefully acknowledges that the Examiner has indicated that these claims have been objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the4 base claims and any intervening claims. Applicant therefore respectfully requests that the objection be withdrawn.

III. Conclusion

In view of the amendments and arguments herein, this Application is believed to be in condition for allowance and favorable action is requested. Applicant reserves the right to prosecute additional claims, including claims of broader scope, in a continuation application.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to **Deposit Account No. 19-3878**. Applicant further reserves the right to prosecute broader claims in this application or a continuation application

The Examiner is invited to telephone the undersigned at the telephone number listed below if it would in any way advance prosecution of this case.

Respectfully submitted,

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Date

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